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COLORATION, *Nototriton gamezi* n. sp. (preserved & living), *Oedipina (maritima* n. sp. [variable], *savagei* n. sp. [ontogen. change]) 42–70; *Hapalogenys merguiensis* n. sp. (in life & preserved) 129–139; *Characidium vestigipinne* n. sp. (in life & preserved, sex. dimorph.) 150–155; *Luperosaurus iskandari* n. sp. (in life & preserved) 191–209; *Candoia (bibroni, aspera, carinata* and other boids) (genet. separ. btwn. popns. w/in spp. rel. to island colon.) 341–352; *Cyprinodon (macularius, eremus)* (nuptial colors in males, spp. diffs.) 353–364; *Liophis (taeniurus, festae, vitti* n. sp., *janaleeae* n. sp.) (descript., main disting. charc. btwn. spp.) 482–490; *Symphurus insularis* n. sp. (descript.) 491–500; *Cnemidophorus (littoralis* n. sp., *nativo, ocellifer)* (in life & preserved) 501–509; *Dasyatis marianae* n. sp. (in life & preserved) 510–515; *Eleutherodactylus ashkapara* n. sp. (in life & preserved) 516–520; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp.) (descript.) 521–535; *Amolops bellulus* n. sp. (in life & preserved) 536–541; *Apsilus dentatus, Chromis cyanea* (juv. snappers mimic chromis, probable soc. mimics) 579–581; *Phelsuma malamakibo* n. sp. (descript.) 763–770; *Tomiyamichthys alleni* n. sp. (in life & preserv.) 771–776; *Eleutherodactylus sambaqui* n. sp. (in life & preserved) 777–781; *Podarcis bocagei* (some preg. females show male color pttn. to reduce cop. attempts by males?) 819–825; *'Barbus' serengetiensis* n. sp. (in life & preserved) 973–982; *Trichomycterus catamarcensis* n. sp. (preserved) 990–996; *Corymbophanes (kaiei* n. sp., *andersoni)* (descript.) 997–1006; *Cottus caeruleomentum* n. sp. (descript.) 1007–1018; *Lampetra (minima, lethophaga)* (n. sp. differs from closest rels.) 1019–1028; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* (preserved) 1029–1047; *Aspidoras depinnai* n. sp. (preserved) 1048–1055; *Lycenchelys fedorovi* n. sp. (2 color morphs, not rel. to sex) 1056–1061.

COMPETITION, *Anolis carolinensis* (sex. dimorph. in aggress. beh. rel. to gender diffs. in reprod. outcome of compet.) 140–149; *Desmognathus (monticola, fuscus), Eurycea cirrigera, Plethodon (cinereus, glutinosus)* (lg. competitors aff. spp. distrib. along moisture gradient) 156–168; *Etheostoma oophylax* (male fin egg-mimic size var. rel. to comp. for females) 782–785; *Physalaemus pustulosus* (nest site choice: avoid conspecific nests) 883–885.

CONSERVATION, *Crystallaria asprella* (phylogen. anal. of 5 isolated popns., 4 are ESU's, recomm. endngrd. status) 20–26; *Catostomus (discobolus, latipinnis), Xyrauchen texanus* (spawning cues in Grand Canyon big river fishes, conserv. implics.) 238–244; *Gila (robusta, intermedia, nigra)* (recomm. listing as endngrd.) 251–256; *Cyprinodon (macularius, eremus)* (recomms. for hab. & popn. manip.) 353–364; *Ambystoma californiense* (mngmnt. recomms.) 365–377; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (mngmnt. recomms. in Colorado R. basin) 402–412; Esocoidei (*Esox, Dallia, Novumbra, Umbra,* Esocinae n. subfam.) (implications from phyl. anal.) 420–431; *Odontesthes argentinensis* (evid. for speciation in estuary popn., import. in cons. mngmnt.) 441–447; *Rana sphenocephala* & other anurans (best method for call surveys for popn. monitoring) 587–592; *Noturus phaeus* (microhab. preserv. most import. for madtoms) 757–762; *Crocodylus acutus* (nesting hab. very limited) 869–873; *Egernia major* (lg. rainfor. lizard microhab. use, conserv. implics.) 931–939.

DENTITION, *Lampetra (minima, lethophaga)* (descript., very var.) 1019–1028; *Sandalodus carbonarius* & *Orthopleurodus carbonarius* = *Deltodus angularis* (fossil) (tooth plates close together shows dentition is one fish) 1090–1096.

DEVELOPMENT, *Rana (sylvatica, pipiens, clamitans, catesbeiana)* (larval morph. chngs. in presence of pred.) 178–190; *Cyprinella venusta* (ontogen. changes in body shape) 270–275; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (correl. of larval tail damage w/ dev. stage) 390–401; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (eff. of low temp. on larval dev.) 402–412; *Nerodia sipedon* (dev. of testosterone increase in males, litter var.) 593–596; *Etheostoma oophylax* (dev. of male fin egg-mimics during reprod. seas.) 782–785; *Oryzias latipes* (lack of correl. of egg or htchlng. size w/

htchlng. growth) 813–818; *Elaphe obsoleta, Nerodia sipedon* (eff. of temper. during dev. on preferred body temp. in neonates) 841–845; *Lampetra minima* (shrink during maturation) 1019–1028.

DIGESTION, Australian pythons (4 genera, 6 spp.) (efficiencies very high, not rel. to body temp. or meal size) 829–834; *Eulamprus tympanum* (timing & degree of incr. met. rate after feeding; lizard eats freq. small meals) 851–855; *Bufo woodhousii* (timing & degree of incr. met. rate after feeding, freq. small meals) 1076–1078.

DISTRIBUTION, *Oedipina maritima* n. sp. (restricted to an island) 42–70; *Eustomias (borealis* n. sp., *curtifilis* n.sp., 9 other spp.) (some spp. widespread, some limited dist.) 96–111; *Hapalogenys merguiensis* n. sp. 129–139; *Characidium vestigipinne* n. sp. 150–155; *Luperosaurus (iskandari* n. sp., *serraticaudus = browni*, & 6 other spp.) (map) 191–209; *Gila (robusta, intermedia, nigra)* 251–256; *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) 432–440; *Liophis (taeniurus, festae, vitti* n. sp., *janaleeae* n. sp.) 482–490; *Symphurus insularis* n. sp. 491–500; *Cnemidophorus littoralis* n. sp. 501–509; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni = S. curvirostris* spp. group) (of genus) 521–535; *Caretta caretta, Lepidochelys kempii* (sea temper. rel. to turtle distrib.) 551–554; *Gambusia (affinis, holbrooki, affinis* x *holbrooki)* (in Conasauga R., evid. of recent introd. of *G. holbrooki*) 555–559; *Salvelinus confluentus, Oncorhynchus clarki, Prosopium (spilonotus, abyssicola, gemmifer), Gila atraria, Richardsonius balteatus, Catostomus (ardens, discobolus), Cottus (bairdi, extensus)* (Lake Bonneville fish remains, new histor. distrib. records) 645–656; *Podarcis atrata* (island distrib. rel. to reduced fecund.) 748–756; viperids (6 genera, 49 spp.) (assessing the meaning of spp. richness from distrib. data) 799–805; *Corymbophanes (kaiei* n. sp., *andersoni)* (genus distrib. relictual, compare to other loricariids) 997–1006; *Cottus (caeruleomentum* n. sp., *b. bairdi)* 1007–1018; *Lampetra minima* (new records after extinction in former known distrib.) 1019–1028; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* 1029–1047; *Lycenchelys fedorovi* n. sp. (very restricted compared to congeners) 1056–1061; *Etheostoma (denoncourti, tippecanoe)* (range exten. for *E. denoncourti*, details of distrib. rel. to thrtnd. status of spp.) 1097–1103.

ECOLOGY, *Gonatodes (hasemani, humeralis)* (compare ecol. of sympat. gekkos) 83–95; *Caretta caretta* (environ. factors in nest-site selection) 119–128; *Desmognathus (monticola, fuscus), Eurycea cirrigera, Plethodon (cinereus, glutinosus)* (lg. competitors aff. spp. distrib. along moisture gradient) 156–168; *Catostomus (discobolus, latipinnis), Xyrauchen texanus* (spawning cues rel. to trib. outflows in Colorado R.) 238–244; *Plethodon cinereus* (territor. acquisition after displacement, ecol. correls.) 276–281; *Morone saxatilis* (growth rate responses to salin. diffs., anadrom. & nonanadrom. popns.) 291–296; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (jumping ability var. btwn. spp. rel. to evol. of niche chngs.) 448–458; *Eurycea (cirrigera, wilderae)* (evid. of charc. displcmnt. in sympat.) 572–578; *Salvelinus confluentus, Oncorhynchus clarki, Prosopium (spilonotus, abyssicola, gemmifer), Gila atraria, Richardsonius balteatus, Catostomus (ardens, discobolus), Cottus (bairdi, extensus)* (Lake Bonneville fish remains, some ecol. info.) 645–656; *Cnemidophorus lineatissimus* (reprod. ecol. of tropical lizard) 712–722; *Noturus phaeus* (hab., microhab., life hist. traits) 757–762; viperids (6 genera, 49 spp.) (histor. processes more import. than ecol. factors in viperid spp. richness) 799–805; *Crocodylus acutus* (reprod.) 869–873; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. (fish assemblage var. across space & time in large reservoir, rel. stable) 917–930; *Egernia major* (lg. rainfor. lizard microhab. use & thermoreg., conserv. implics.) 931–939.

EGGS, *Gonatodes (hasemani, humeralis)* (egg size & clutch size very sim. btwn. sympat. gekkos) 83–95; *Etheostoma zonale* (w/in popn. ann. var. in clutch & egg size) 230–233; *Cottus pygmaeus* (allopaternal care, clutch sizes) 262–264; *Hyperolius* (4 W. Ugandan spp.) (heavy fly infest. on arboreal egg masses) 560–566; *Hemidactylium scutatum, Desmognathus ocoee* (*H. scutatum* eggs toxic to beetle preds.) 597–600; *Pleurodema borellii* (ovipos. site selection for low tdpl.-density pools) 606–609; *Podarcis milensis* (small clutch size, lg. eggs) 610–614; *Etheostoma olmstedi* (parentage of eggs in male-guarded nests) 740–747; *Podarcis atrata* (egg size & shape rel. to clutch size) 748–756; *Etheostoma oophylax* (male fin egg-mimic size var.) 782–785; *Oryzias latipes* (lack of correl. of egg or htchlng. size w/ htchlng. growth) 813–818; *Ctenophorus (decresii, ornatus)* (incub. temp. determ. htchlg. sex & tail length) 958–964; *Lycenchelys fedorovi* n. sp. (descript.) 1056–1061; *Calotes versicolor* (seas. var. in egg size rel. to offspg. fitness) 1062–1067.

ELECTRIC ORGAN, *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni = S. curvirostris* spp. group) (high EOD freqs. of genus) 521–535.

ENDANGERED SPECIES, *Crystallaria asprella* (phylogen. anal. of 5 isolated popns., 4 are ESU's, recomm. endngrd. status, sp. extinct in 6 states) 20–26; *Caretta caretta* (environ. factors in nest-site selection) 119–128; *Xyrauchen texanus* (evid. of spawning in Grand Canyon) 238–244; *Gila (robusta, intermedia, nigra)* (recomm. listing as endngrd.) 251–256; *Cottus pygmaeus = Cottus paulus* (replacement name for threatened sp.) 302; *Cyprinodon (macularius, eremus)* (recomms. for hab. & popn. manip.) 353–364; *Ambystoma californiense* (life hist. of sp. endngrd. by hab. loss) 365–377; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (eff. of low temp. on early life stages) 402–412; Esocoidei (*Esox, Dallia, Novumbra, Umbra,* Esocinae n. subfam.) (spp. of special concern: *Novumbra hubbsi, Unbra krameri,* other *Umbra* & *Dallia* relictual) 420–431; *Caretta car-*

etta, Lepidochelys kempii (sea temper. rel. to turtle distrib.) 551–554; *Noturus phaeus* (*N. phaeus* close rel. of endngrd. *N. funebris*, life hist. info useful in conserv. of rel. spp.) 757–762; *Etheostoma (denoncourti, tippecanoe)* (recomm. thrtnd. status for *E. denoncourti*, *E. tippecanoe* thrtnd. or endngrd. in most of range) 1097–1103.

ESTIVATION, *Kinosternon sonoriense* (evid. of capac. to estiv. in aquatic turtle, discuss beh. & physiol. aspects) 684–700.

EVOLUTION, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* (evol. potential of hybridization) 11–19; *Ambystoma macrodactylum* (genetic popn. struct. shows evol. charcs. of popns., migration rate, allozyme data) 27–35; *Phrynosoma (taurus, braconnieri)* (of reprod. mode & seas. in genus, rel. to diff. clad. anals.) 222–229; *Catostomus (discobolus, latipinnis), Xyrauchen texanus* (of reprod. timing in arid SW U.S.) 238–244; *Cottus pygmaeus* (evol. hypoth. about allopaternal care of eggs) 262–264; Esocoidei (*Esox, Dallia, Novumbra, Umbra*, Esocinae n. subfam.) (change in evol. interpret. from clad. anal. of mtDNA data) 420–431; *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) (of parthen. spp., clad. anal. of mtDNA shows origin & timing) 432–440; *Odontesthes argentinensis* (evid. for evol. of estuary sp. from marine sp.) 441–447; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (jumping ability var. btwn. spp. rel. to evol. of niche chngs.) 448–458; *Eurycea (cirrigera, wilderae)* (evid. of charc. displcmnt. in sympat.) 572–578; *Kinosternon sonoriense* (adapt. aspects of beh. & physiol. in estivation) 684–700; *Ammocrypta (beani, bifascia, meridiana, vivax, clara, pellucida)* (speciation in genus, mtDNA & morph. charcs.) 701–711; *Salaria fluviatilis* (orig. of sp. from 2 diff. colonizations) 723–731; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (adapt. mech. for Bergmann's Rule, size-rel. overwintering mortal.) 732–739; *Podarcis atrata* (red. fecund. compared to close rels. correl. w/ island distrib.) 748–756; *Etheostoma oophylax* (male fin egg-mimic size var., discuss female choice) 782–785; Microdesmidae (*Cerdale, Clarkichthys, Microdesmus, Gunnellichthys, Paragunnellichthys*, 30 spp.) (charc. evol. w/in fam.) 940–957; *Ctenophorus (decresii, ornatus)* (evol. advntg. of temp.-depend. sex determ.) 958–964; *Lampetra (minima, lethophaga)* (biogeogr. & life hist. factors in evol. of spp.) 1019–1028; *Calotes versicolor* (optim. egg size hypoth. for lizards not true for *C. versicolor*) 1062–1067; *Pteronotropis (welaka, hubbsi)* (sister spp. rel. supports single evol. origin of parasitic nest-assoc. w/ centrarchids) 1068–1075; *Physalaemus pustulosus* (male/female & yr. to yr. var. in breeding activ. in resp. to rainfall, adapt. signif.) 1104–1108.

EXTINCTION, *Crystallaria asprella* (extinct in 6 states, remaining popns. very low #'s) 20–26; *Lampetra minima* (rediscover presumed-extinct sp., redescribe, compare to rels.) 1019–1028.

FECUNDITY, *Podarcis atrata* (reduced fec. compared to close rels. correl. w/ island distrib.) 748–756; *Diapoma speculiferum* (of intern. inseminator, compare to int. & extern. insem. rels.) 983–989; *Calotes versicolor* (clutch mass stable, seas. var. in egg size) 1062–1067.

FEEDING, *Mabuya (striata sparsa, sulcata, variegata, acutilabris, spilogaster)* (diff. foraging modes w/in genus) 112–118; *Bufo crucifer* (aggregated larval feeding aff. diet) 210–215; *Carcharhinus perezi, Elacatinus randalli* (goby cleans shark) 297–299; *Sparisoma (aurofrenatum, chrysopterum)* (interspp. aggress., overlap microhab. & feeding) 674–683; *Eulamprus tympanum* (timing & degree of incr. met. rate after feeding; lizard eats freq. small meals) 851–855; *Bufo woodhousii* (timing & degree of incr. met. rate after feeding, freq. small meals) 1076–1078.

FOOD, *Gonatodes (hasemani, humeralis)* (diet same btwn. sympat. gekkos) 83–95; *Bufo crucifer* (aggregated larval feeding aff. diet) 210–215; *Osteopilus septentrionalis* (cannib. advantageous only in poor-diet condits.) 469–474; *Cnemidophorus littoralis* n. sp. (stom. conts.) 501–509; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni* = *S. curvirostris* spp. group) (notes on diet of genus) 521–535; *Osteolaemus tetraspis osborni* (prey type varies, stom. conts.) 582–586; *Noturus phaeus* (stom. conts., seas. diffs.) 757–762; *Hydrolagus affinis* (first report of fish pred. on hydrothermal vent mussels) 806–807; *Trichomycterus catamarcensis* n. sp. (stom. conts.) 990–996; *Lyceuchelys fedorovi* n. sp. (stom. & intest. conts.) 1056–1061.

GENETICS, *Ambystoma macrodactylum* (genetic popn. struct., allozyme data) 27–35; *Bufo (microscaphus, woodhousii, microscaphus x woodhousii)* (mtDNA gene markers for anal. of hybrid.) 234–237; *Odontesthes argentinensis* (gen. diverg. & allozymes indicate speciation btwn. popns.) 441–447; *Acantholingua ohridana* = *Salmo ohridana* (mt & nuclear DNA evid. for synon. genus) 546–550; *Salaria fluviatilis* (alloz. eluc. orig. of sp. from 2 diff. colonizations) 723–731; *Etheostoma olmstedi* (to anal. parentage of offspring in male-guarded nests) 740–747; *Crotaphytus collaris* (small eff. popn. size suscept. to gen. drift) 786–791.

GEOGRAPHIC LOCALITIES

Alabama, *Crystallaria asprella* 20–26; *Cottus pygmaeus* 262–264; *Cottus pygmaeus* = *Cottus paulus* 297–299; *Ammocrypta (bifascia, meridiana)* 701–711; *Pteronotropis (welaka, hypselopterus, euryzonus, signipinnis)* 1068–1075.

Andaman Sea, *Hapalogenys merguiensis* n. sp. 129–139.

Argentina, *Pleurodema borellii* 606–609; *Trichomycterus catamarcensis* n. sp. 990–996; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *anus, labialis, platymetopon)* 1029–1047.

Arizona, *Bufo (microscaphus, woodhousii, microscaphus x woodhousii)* 234–237; *Catostomus (discobolus, latipinnis), Xyrauchen texanus* 238–244; *Gila (robusta, intermedia, nigra)* 251–256; *Cyprinodon eremus* 353–364; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* 402–412.

Arkansas, *Crystallaria asprella* 20–26.
Armenia, *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) 432–440.
Atlantic Ocean, *Eustomias (borealis* n. sp. [NW], *curtifilis* n.sp. [S], 9 other spp. [N]) 96–111; *Carcharhinus perezi, Elacatinus randalli* (SW) 297–299; *Symphurus insularis* n. sp. (E) 491–500; *Dasyatis marianae* n. sp. (SW) 510–515; *Hydrolagus affinis* (mid-Atl. Ridge) 806–807; *Lycodes terraenovae* (NW) 846–850; *Dasyatis marianae* (SW) 889–890.
Australia, *Acanthochromis polyacathus* (QLD) 36–41; Australian pythons (4 genera, 6 spp.) 829–834; *Eulamprus tympanum* (NSW) 851–855; *Egernia major* (NSW) 931–939; *Ctenophorus (decresii, ornatus)* (NSW) 958–964; *Pseudoplesiops howensis* 1083–1089.
Azores, *Symphurus insularis* n. sp. 491–500; *Hydrolagus affinis* 806–807.
Bahamas, *Carcharhinus limbatus* 282–284.
Belize, *Crocodylus acutus* 869–873.
Bolivia, *Liophis taeniurus* 482–490; *Eleutherodactylus (ashkapara* n. sp., *fraudator, pluvicanorus)* 516–520.
Brazil, *Gonatodes (hasemani, humeralis)* 83–95; *Characidium vestigipinne* n. sp. (& 6 congeners from Brazil) 150–155; *Bufo crucifer* 210–215; *Carcharhinus perezi, Elacatinus randalli* 297–299; *Odontesthes argentinensis* 441–447; *Cnemidophorus (littoralis* n. sp., *nativo, ocellifer)* 501–509; *Dasyatis marianae* n. sp. 510–515; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp.) 521–535; *Eleutherodactylus (sambaqui* n. sp., *manezinho)* 777–781; *Phalloceros caudiomaculatus* 792–798; *Diapoma speculiferum* 983–989; *Loricariichthys (melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* 1029–1047; *Aspidoras depinnai* n. sp. 1048–1055; *Rhamphichthys cingulatus* = *Gymnotus coatesi* 1114–1117.
California, *Cyprinodon macularius* 353–364; *Ambystoma californiense* 365–377; *Paralabrax maculatofasciatus* 459–468; *Hyla regilla* 863–868.
Canada, *Rana (catesbeianna* [New Brun.], *sylvatica* [Nova Scotia]) 390–401; *Lycodes terraenovae* (Newfound.) 846–850.
Canary Islands, Gonostomatidae 378–389; *Symphurus insularis* n. sp. 491–500; *Gallotia (simonyi, stehlini, atlantica, caesaris)* 601–605.
Cayman Islands, *Apsilus dentatus, Chromis cyanea* 579–581.
China, *Amolops bellulus* n. sp. 536–541.
Colombia, *Oedipina (Oedopinola* n. subgen.) 42–70.
Columbretes Islands, *Podarcis atrata* 748–756.
Congo Republic, *Osteolaemus tetraspis osborni* 582–586.
Coral Sea, Gonostomatidae 378–389.
Costa Rica, *Nototriton* (incl. *N. gamezi* n. sp.), *Oedipina (Oedopinola* n. subgen. incl. *O. savagei* n. sp.) 42–70; *Rhinophrynus dorsalis* 390–401.
Ecuador, *Oedipina* (*Oedopinola* n. subgen.) 42–70; *Phyllomedusa tomopterna* 390–401; *Liophis (festae, vitti* n. sp.) 482–490.
Fernando de Noronha Archipelago, *Carcharhinus perezi, Elacatinus randalli* 297–299.
Figi, *Candoia bibroni* 341–352; *Pseudoplesiops rosae* 1083–1089.
Florida, *Caretta caretta* 119–128; *Osteopilus septentrionalis* 469–474; *Sparisoma (aurofrenatum, chrysopterum)* 674–683.
Georgia, *Anolis carolinensis* 140–149; *Gambusia (affinis, holbrooki, affinis* x *holbrooki)* 555–559; *Eurycea (cirrigera, wilderae)* 572–578.
Greece, *Podarcis milensis* 610–614; *Salaria fluviatilis* 723–731.
Guam, *Boiga irregularis* 886–888.
Guatemala, *Oedipina (Oedipina* n. subgen.), *Cryptotriton* s. gen. 42–70.
Gulf of Mexico, Gonostomatidae 378–389.
Guyana, *Corymbophanes (kaiei* n. sp., *andersoni, bahianus* = *Hemipsilichthys bahianus)* 997–1006.
Hawaii, Gonostomatidae 378–389.
Honduras, *Nototriton, Oedipina (Oedipina* s. subgen., *Oedopinola* n. subgen.), *Cryptotriton* n. gen. 42–70.
Idaho, *Ambystoma macrodactylum* 27–35.
Illinois, *Ammocrypta pellucida* 701–711; *Ambystoma tigrinum* 856–859.
India, *Calotes versicolor* 1062–1067.
Indian Ocean, Gonostomatidae 378–389.
Indiana, *Notophthalmus viridescens* 413–419; *Etheostoma tippecanoe* 1097–1103.
Indonesia, *Luperosaurus (iskandari* n. sp. [Sulawesi], *brooksi* [Sumatra], *yasumai* [Kal.]) 191–209; *Tomiyamichthys (alleni* n. sp., *oni)* 771–776; *Lepidodactylus (lombocensis* [Lomboc], *intermedius* [Komodo Is., Rintja Is., Padar Is.]) 1109–1113.
Japan, *Tomiyamichthys (alleni* n. sp., *oni)* 771–776; *Chaenogobius annularis* = *Chasmichthys dolichognathus* 835–840.
Kansas, *Bufo woodhousii* 1076–1078.
Kentucky, *Etheostoma oophylax* 782–785; *Etheostoma tippecanoe* 1097–1103.
Kuril Islands, *Lycenchelys fedorovi* n. sp. 1056–1061.
Louisiana, *Crystallaria asprella* 20–26; *Pteronotropis (welaka, hubbsi, signipinnis)* 1068–1075.
Macedonia, *Acantholingua ohridana* = *Salmo ohridana* 546–550.
Madagascar, *Phelsuma malamakibo* n. sp. 763–770.
Madeira, *Symphurus insularis* n. sp. 491–500.
Malaysia, *Luperosaurus serraticaudus* = *browni* (Sarawak) 191–209.
Maryland, *Morone saxatilis* 291–296; *Bufo americanus, Pseudacris crucifer, Rana sylvatica* 390–401; *Cottus caeruleomentum* n. sp. 1007–1018.
Mauritania, Gonostomatidae 378–389.
Mediterranean Sea, *Salaria fluviatilis* 723–731; *Podarcis atrata* 748–756.
Mexico, *Oedipina (Oedopinola* n. subgen. [Chiapas]), *Cryptotriton* n. gen. (Chiapas, Oax.) 42–70; *Phrynosoma (taurus* [Guer., Oax., Puebla], *braconnieri* [Oax., Puebla]) 222–229; *Gila intermedia* (Son.) 251–256; *Conopsis nasus* (Dur.) 285–287; *Cyprinodon (macularius* [Baja Cal., Son.], *eremus* [Son.]) 353–364; *Paralabrax maculatofasciatus* (Baja Cal.) 459–468; *Cnemidophorus lineatissimus* (Jal.) 712–722.
Michigan, *Rana (sylvatica, pipiens, clamitans, catesbiana)* 178–190.
Minnesota, *Crystallaria asprella* 20–26; *Etheostoma nigrum* 701–711.
Mississippi, *Cyprinella venusta* 270–275; *Polyodon spathula* 288–290; *Noturus phaeus* 757–762.

Missouri, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* 11–19; *Ambystoma annulatum* 542–545; *Ammocrypta (vivax, clara)* 701–711; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* 732–739; *Hyla chrysoscelis* 860–862.
Montana, *Ambystoma macrodactylum* 27–35.
Namibia, *Mabuya (striata sparsa, sulcata, variegata, acutilabris, spilogaster)* 112–118.
New Mexico, *Gila (robusta, intermedia, nigra)* 251–256; *Kinosternon sonoriense* 684–700.
New York, *Lepomis cyanellus* 1079–1082.
New Zealand, Gonostomatidae 378–389.
Nicaragua, *Oedipina (Oedipina* n. subgen.) 42–70.
North Carolina, *Caretta caretta, Lepidochelys kempii* 551–554; *Desmognathus ocoee* 597–600.
Ohio, *Nerodia sipedon* 593–596; *Sandalodus carbonarius* & *Orthopleurodus carbonarius* = *Deltodus angularis* (fossil) 1090–1096; *Etheostoma tippecanoe* 1097–1103.
Oklahoma, *Crotaphytus collaris* 786–791; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. 917–930; *Pteronotropis hubbsi* 1068–1075.
Oregon, *Ascaphus truei 390–401; Lampetra (minima, lethophaga)* 1019–1028.
Pacific Ocean, *Lycenchelys fedorovi* n. sp. (NW) 1056–1061.
Palau, *Candoia carinata* 341–352.
Panama, *Oedipina (Oedipina* n. subgen, *Oedopinola* n. subgen., incl. *maritima* n. sp.) 42–70; *Physalaemus pustulosus* 883–885, 1104–1108.
Papua New Guinea, *Candoia (aspera, carinata)* 341–352.
Paraguay, *Phalloceros caudiomaculatus* 792–798; *Loricariichthys (rostratus* n. sp., *labialis, platymetopon)* 1029–1047.
Pennsylvania, *Rana sylvatica* 879–882; *Etheostoma tippecanoe* 1097–1103.
Peru, *Liophis (taeniurus, festae, janaleeae* n. sp.) 482–490.
Philippines, *Luperosaurus (joloensis, palawalensis, cumingi, macgregori)* 191–209; *Pseudoplesiops rosae* 1083–1089.
Poland, *Rana ridibunda* 448–458.
Russia, *Lycenchelys fedorovi* n. sp. 1056–1061.
Samoa, *Candoia bibroni* 341–352.
Solomon Islands, *Candoia carinata* 341–352.
South Africa, *Mabuya sulcata* 112–118.
South America, viperids (6 genera, 49 spp.) 799–805.
South Carolina, *Morone saxatilis* 291–296; *Rana sphenocephala* & other anurans 587–592; *Etheostoma olmstedi* 740–747; *Ambystoma talpoideum* 808–812.
Spain, *Salaria fluviatilis* 723–731; *Podarcis atrata* 748–756; *Podarcis bocagei* 819–825; *Triturus boscai* 874–878.
Switzerland, *Rana (lessonae, esculenta* [= *lessonae* x *ridibunda*]) 448–458.
Tanzania, *'Barbus' serengetiensis* n. sp. 973–982.
Tennessee, *Etheostoma zonale* 230–233; *Etheostoma (nigripinne, crossopterum, nigripinne* x *crossopterum)* 475–481; *Gambusia affinis* 555–559; *Pimephales notatus* 567–571; *Etheostoma (denoncourti, tippecanoe)* 1097–1103.
Texas, *Hemidactylus turcicus, Sceloporus olivaceous* 245–250; *Acris crepitans blanchardi* 257–261; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. 917–930.
Thailand, *Hapalogenys merguiensis* n. sp. 129–139.
Tonga, *Pseudoplesiops rosae* 1083–1089.
Turkey, *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) 432–440.
Uganda, *Hyperolius* (4 spp.) 560–566.
Uruguay, *Odontesthes argentinensis* 441–447; *Phalloceros caudiomaculatus* 792–798; *Loricariichthys anus* 1029–1047.
Utah, *Salvelinus confluentus, Oncorhynchus clarki, Prosopium (spilonotus, abyssicola, gemmifer), Gila atraria, Richardsonius balteatus, Catostomus (ardens, discobolus), Cottus (bairdi, extensus)* (Lake Bonneville fish remains) 645–656.
Venezuela, *Sternarchorhynchus roseni* 521–535.
Virginia, *Desmognathus (monticola, fuscus), Eurycea cirrigera, Plethodon (cinereus, glutinosus)* 156–168; *Plethodon cinereus* 169–177, 276–281; *Hemidactylium scutatum* 597–600; *Cottus caeruleomentum* n. sp. 1007–1018; *Etheostoma denoncourti* 1097–1103.
West Virginia, *Crystallaria asprella* 20–26; *Etheostoma tippecanoe* 1097–1103.
GROWTH, *Rana (sylvatica, pipiens, clamitans, catesbiana)* (larval growth reduced in presence of pred.) 178–190; *Gambusia affinis* (aff. by var. cannib.) 216–221; *Polyodon spathula* (neg. allometry of rostrum) 288–290; *Morone saxatilis* (eff. of temp. & salin. var. on 1st yr. growth, popn. diffs.) 291–296; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (eff. of low temp. on larvae) 402–412; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (rel. to larval dens., correl. w/ jumping ability) 448–458; *Osteopilus septentrionalis* (eff. of cannib. on larval growth) 469–474; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (select. for rapid growth due to size-rel. overwintering mortal.) 732–739; *Oryzias latipes* (lack of correl. of egg or htchlng. size w/ htchlng. growth) 813–818.

HABITAT, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* (hybrid & non-hybrid larval resp. to hab. desicc.) 11–19; *Crystallaria asprella* (very limited & declining, rel. to isol. of popns., low #'s, endngrd. status) 20–26; *Acanthochromis polyacathus* (hab. diffs. rel. to pred. on juv. coral reef fish, eff. of size of predator) 36–41; *Nototriton gamezi* n. sp., *Oedipina maritima* n. sp. (notes) 42–70; *Gonatodes (hasemani, humeralis)* (microhab. diffs. main ecol. diff. btwn. sympat. gekkos) 83–95; *Caretta caretta* (microhab. of nest sites, beach slope most import. environ. factor in nest-site selection) 119–128; *Hapalogenys merguiensis* n. sp. (notes) 129–139; *Characidium vestigipinne* n. sp. (notes) 150–155; *Desmognathus (monticola, fuscus),*

Eurycea cirrigera, Plethodon (cinereus, glutinosus) (microhab. of retreats vary w/ competition) 156–168; *Gambusia affinis* (refuge avail. aff. cannib., exper. habs.) 216–221; *Morone saxatilis* (eff. of temp. & salin. var. on 1st yr. growth, hab. diffs.) 291–296; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (correl. of larval tail damage w/ microhab.) 390–401; *Odontesthes argentinensis* (evid. for speciation by hab. isol., estuary vs. marine) 441–447; *Osteopilus septentrionalis* (facult. cannib. advant. in ephem. hab.) 469–474; *Cnemidophorus littoralis* n. sp. (notes) 501–509; *Dasyatis marianae* n. sp. (notes) 510–515; *Eleutherodactylus (ashkapara* n. sp., *fraudator, pluvicanorus)* (notes) 516–520; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni* = *S. curvirostris* spp. group) (general descript. hab. for genus) 521–535; *Amolops bellulus* n. sp. (notes) 536–541; *Caretta caretta, Lepidochelys kempii* (sea temper. preferences) 551–554; *Eurycea (cirrigera, wilderae)* (minor hab. diffs. btwn. sister spp. in sympat.) 572–578; *Sparisoma (aurofrenatum, chrysopterum)* (interspp. aggress., overlap microhab. & food) 674–683; *Cnemidophorus lineatissimus* (reprod. ecol. in tropical dry forest) 712–722; *Noturus phaeus* (descript., seas. var. rel. to conserv. mngmnt.) 757–762; *Phelsuma malamakibo* n. sp. (rock-dweller in rainforest) 763–770; *Tomiyamichthys alleni* n. sp. (notes) 771–776; *Eleutherodactylus (sambaqui* n. sp., *manezinho)* (notes, noct., streamside, unusual for *Eleutherodactylus*) 777–781; *Hydrolagus affinis* (chimera feeding at hydrothermal vent) 806–807; *Crocodylus acutus* (nesting & nursery hab. very limited, need for conserv.) 869–873; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. (depth a major factor in fish assemblage var. in large reservoir) 917–930; *Egernia major* (lg. rainfor. lizard microhab. use, conserv. implics.) 931–939; *'Barbus' serengetiensis* n. sp. (notes) 973–982; *Trichomycterus catamarcensis* n. sp. (notes, high elevation) 990–996; *Corymbophanes (kaiei* n. sp., *andersoni)* (notes) 997–1006; *Lampetra minima* (spawning) 1019–1028; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* (notes) 1029–1047; *Lycenchelys fedorovi* n. sp. (notes, rel. to very restricted distrib.) 1056–1061.

HERMAPHRODITISM, *Crenicara punctulata* (protogyn. sequent. hermaph., beh. & hist. evid.) 71–82; *Paralabrax maculatofasciatus* (var. hermaph. pttns. btwn. 6 isol. popns.) 459–468.

HISTOLOGY, *Crenicara punctulata* (domin. female change from ovaries to testes) 71–82; *Paralabrax maculatofasciatus* (hermaph. charcs. highly var. btwn. popns.) 459–468; *Diapoma speculiferum* (of female gonads, reprod. seas., fecund., intern. inseminator) 983–989; *Pseudoplesiops (rosae, howensis)* (of highly specialized urin. bladder, wall appears secretory) 1083–1089.

HOME RANGE, *Anolis carolinensis* (sex. dimorph. in aggress. beh. rel. to gender diffs. in territor.) 140–149; *Plethodon cinereus* (territor. acquisition after displacement, gender diffs.) 276–281; *Sparisoma (aurofrenatum, chrysopterum)* (home range overlap rel. to interspp. aggress.) 674–683; *Crotaphytus collaris* (strong site fidel., home range size) 786–791.

HYBRIDIZATION, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* (experimental hybrid., larval fitness in dry environ.) 11–19; *Bufo (microscaphus, woodhousii, microscaphus x woodhousii)* (mtDNA gene markers for anal. of hybrid.) 234–237; *Gila (robusta, intermedia, nigra)* (evid. of hybrid origin of *G. nigra* from *G. robusta* x *G. intermedia*) 251–256; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (correl. w/ var. in jumping ability) 448–458; *Etheostoma (nigripinne, crossopterum, nigripinne x crossopterum)* (intermed. sound prod. by hybrids) 475–481; *Gambusia (affinis, holbrooki, affinis* x *holbrooki)* (recent introd. of *G. holbrooki*, evid. of hybrid. in areas of sympat.) 555–559; *Morone (saxatilis, chrysops, saxatilis* x *chrysops)* (sp. & hybrid ident. of larvae by shape w/ landmark-based morphomets.) 965–972.

LARVAE, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* (experimental hybrid., larval fitness in dry environ.) 11–19; *Rana (sylvatica, pipiens, clamitans, catesbiana)* (morph. changes in presence of pred.) 178–190; *Bufo crucifer* (aggregated larval feeding aff. diet) 210–215; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (pttns. of pred.-induced tdpl. tail damage) 390–401; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (eff. of low temp. on larval growth, devel. chngs., cold shock beh.) 402–412; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (jumping ability in metamorphs rel. to larval dens.) 448–458; *Osteopilus septentrionalis* (larval cannib. advantageous only in poor-diet condits.) 469–474; *Amolops bellulus* n. sp. (descript.) 536–541; *Pleurodema borellii* (ovipos. site selection for low tdpl.-density pools) 606–609; *Morone (saxatilis, chrysops, saxatilis* x *chrysops)* (sp. ident. of larvae by shape w/ landmark-based morphomets.) 965–972.

LIFE HISTORY, *Gonatodes (hasemani, humeralis)* (very sim. btwn. sympat. gekkos) 83–95; *Ambystoma californiense* (sp. endngrd. by hab. loss) 365–377; *Noturus phaeus* (rel. to hab., info. for conserv. mngmnt.) 757–762; *Phalloceros caudiomaculatus* (new pttn. of livebearing: matrotrophic, no superfetation; polymodal adult male size) 792–798.

LIGHT, *Hemidactylus turcicus, Sceloporus olivaceous* (photobiosyn. of Vit. D, noct. & diurnal lizards compared) 245–250.

LOCOMOTION, *Mabuya (striata sparsa, sulcata, variegata, acutilabris, spilogaster)* (speed diffs. btwn.ambush vs. active foragers) 112–118; *Rana (sylvatica, pipiens, clamitans, catesbiana)* (larval morph. changes in presence of pred. rel. to swimming speeds) 178–190; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer,*

Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis (correl. of larval tail damage w/ loc. beh.) 390–401; *Rana (lessonae, ridibunda, esculenta* [= *lessonae* x *ridibunda*]) (jumping ability var. btwn. spp. & larval densities) 448–458.

METHODS, *Acris crepitans blanchardi* (female phonotaxis pref. experiments not aff. by amplexus) 257–261; *Thamnophis sirtalis* (MRI imaging of brain & chemosens. organs in living snakes) 265–269; fishes (staining bone w/out damaging muscle or cart.) 300–301; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (computer technique to assess tdpl. tail damage) 390–401; *Gambusia (affinis, holbrooki, affinis* x *holbrooki)* (recomm. fin ray counts to disting. spp. & hybrids) 555–559; *Rana sphenocephala* & other anurans (best method for call surveys for popn. monitoring) 587–592; *Etheostoma olmstedi* (computer-simul. method to estim. # of mothers in male-guarded nests) 740–747; *Crotaphytus collaris* (genetic & ecol. method to estim. eff. popn. size very similar) 786–791; viperids (6 genera, 49 spp.) (meth. to assess role of local condits. vs. histor. processes in spp. richness) 799–805; *Hyla (chrysoscelis, versicolor)* (nucleolar number not good ident. charc. for ploidy) 860–862; *Boiga irregularis* (mechanical mouse lure for trapping snakes) 886–888; *Morone (saxatilis, chrysops, saxatilis* x *chrysops)* (sp. ident. of larvae by shape w/ landmark-based morphomets.) 965–972.

MICROSATELLITE DNA, *Etheostoma olmstedi* (to anal. parentage of offspring in male-guarded nests) 740–747.

MIGRATION, *Ambystoma macrodactylum* (genetic popn. struct. shows evol. charcs. of popns., migration rate, allozyme data) 27–35; *Ambystoma californiense* (breeding) 365–377.

MIMICRY, *Apsilus dentatus, Chromis cyanea* (juv. snappers mimic chromis, probable soc. mimics) 579–581; *Etheostoma oophylax* (male fin egg-mimic size var.) 782–785; *Podarcis bocagei* (some preg. females show male color pttn. to reduce cop. attempts by males?) 819–825.

MITOCHONDRIAL DNA, *Cyprinella* (all 24 U. S. species) (mtDNA in clad. anal.of genus) 1–10; *Crystallaria asprella* (in clad. anal. of sp.) 20–26; *Nototriton* (incl. *gamezi* n.sp.), *Oedipina (Oedipina* n. subgen., *Oedopinola* n. subgen. incl. *maritima* n. sp. & *savagei* n. sp.), *Cryptotriton* n. gen. (in clad. anal.) 42–70; *Bufo (microscaphus, woodhousii, microscaphus* x *woodhousii)* (gene markers for anal. of hybrid.) 234–237; *Candoia (bibroni, aspera, carinata* and other boids) (in phyl. anal.) 341–352; *Cyprinodon (macularius, eremus)* (in phyl. anal., conserv. implics.) 353–364; Gonostomatidae (all 4 genera, 5 spp. reassigned to 5th genus) (in clad. anal.) 378–389; Esocoidei (*Esox, Dallia, Novumbra, Umbra,* Esocinae n. subfam.) (in clad. anal.) 420–431; *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) (in determ. origin of parthen. spp.) 432–440; *Ambystoma annulatum* (nonglacial past climatic chngs. aff. present mtDNA var.) 542–545; *Acantholingua ohridana* = *Salmo ohridana* (mt & nuclear DNA evid. for synon. genus) 546–550; *Ammocrypta (beani, bifascia, meridiana, vivax, clara, pellucida)* and all other darter genera (21 spp.) (complete cyt b seq. supports *Ammocrypta* generic status) 701–711; *Lampetra (minima, lethophaga)* (compare *L. minima* to rels., *L. lethophaga* is sister to *L. minima*) 1019–1028; *Pteronotropis (welaka, hubbsi, hypselopterus, euryzonus, signipinnis)* (in phyl. anal.) 1068–1075.

MORPHOLOGY, *Rana (sylvatica, pipiens, clamitans, catesbiana)* (larval morph. changes in presence of pred.) 178–190; *Cyprinella venusta* (ontog. & allometry of body shape, sex. dimorph.) 270–275; *Polydon spathula* (var. in rostral size & shape, agerel.) 288–290; *Morone (saxatilis, chrysops, saxatilis* x *chrysops)* (sp. ident. of larvae by shape w/ landmark-based morphomets.) 965–972; *Pseudoplesiops (rosae, howensis)* (highly specialized urin. bladder, wall appears secretory) 1083–1089.

NESTING, *Caretta caretta* (environ. factors in nest-site selection, beach slope most import.) 119–128; *Cottus pygmaeus* (allopaternal care of eggs) 262–264; *Etheostoma (nigripinne, crossopterum, nigripinne* x *crossopterum)* (sound prod. during spawning in cavity-nesters) 475–481; *Pimephales notatus* (male sound prod. during reprod. aggress. in cavity-nesters) 567–571; *Pleurodema borellii* (foam nest ovipos. site selection for low tdpl.-density pools) 606–609; *Etheostoma olmstedi* (parentage of offspring in male-guarded nests) 740–747; *Etheostoma oophylax* (male fin egg-mimic size var.) 782–785; *Crocodylus acutus* (descript., seas., clutch size, htchng. time, surv. high, female nest defence) 869–873; *Physalaemus pustulosus* (nest site choice: avoid conspecific nests) 883–885; *Ctenophorus (decresii, ornatus)* (temp.-depend. sex determ.) 958–964; *Lampetra minima* (descript.) 1019–1028; *Pteronotropis (welaka, hubbsi)* (sister spp. parasitic nest-assoc. w/ centrarchids) 1068–1075.

NOMENCLATURE, *Luperosaurus (serraticaudus* = *browni)* (synon. sp.) 191–209; *Gila (robusta, intermedia, nigra)* (resolve nomen. of Gila R. chubs) 251–256; *Conopsis nasus* (design. neotype) 285–287; *Cottus pygmaeus* = *Cottus paulus* (replacement name) 297–299; Esocoidei (*Esox, Dallia, Novumbra, Umbra,* Esocinae n. subfam.) (change in fam. plcmnt. for *Dallia* & *Novumbra,* n. subfam.) 420–431; *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) (*L. raddei* includes *L. nairensis,* mtDNA data) 432–440; *Chaenogobius annularis* = *Chasmichthys dolichognathus* (discover holotype of genus type sp. is senior synon., revisions of both genera will be necessary) 835–840; *Lycodes terraenovae* (rediscover syntypes, verify sp. valid., lectotype design.) 846–850; *Dasyatis marianae* (correct name for sp.) 889–890; *Corymbophanes (kaiei* n. sp., *andersoni, bahianus* = *Hemipsilichthys bahianus)* (n. sp., reassign. sp.) 997–1006; *Sandalodus carbonarius* & *Orthopleurodus carbonarius* = *Deltodus angularis* (fossil) (tooth plates close together shows dentition is one fish) 1090–1096; *Rham-*

phichthys cingulatus = *Gymnotus coatesi* (synon. spp.) 1114–1117.
NUCLEAR DNA, *Acantholingua ohridana* = *Salmo ohridana* (mt & nuclear DNA evid. for synon. genus) 546–550.

OLFACTION, *Mabuya (striata sparsa, acutilabris)* (chem. prey detect. by active forager, not ambush forager) 112–118; *Thamnophis sirtalis* (MRI imaging of olfact. bulbs in living snakes) 265–269.
ORIENTATION, *Notophthalmus viridescens* (rapid rate of orient. & learning w/ geomag. cues) 413–419.
OSTEOLOGY, *Oedipina (maritima* n. sp., *savagei* n. sp.) 42–70; fishes (staining bone w/out damaging muscle or cart.) 300–301; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni* = *S. curvirostris* spp. group) (import. taxon. charc.) 521–535; *'Barbus' serengetiensis* n. sp. (many osteol. charcs. disting. n. sp.) 973–982; *Aspidoras depinnai* n. sp. (descript.) 1048–1055.

PALEONTOLOGY, *Salvelinus confluentus, Oncorhynchus clarki, Prosopium (spilonotus, abyssicola, gemmifer), Gila atraria, Richardsonius balteatus, Catostomus (ardens, discobolus), Cottus (bairdi, extensus)* (Lake Bonneville fish remains, biogeogr. info.) 645–656; *Sandalodus carbonarius* & *Orthopleurodus carbonarius* = *Deltodus angularis* (Carboniferous fossil) (tooth plates close together shows dentition is one fish) 1090–1096.
PARASITES, *Osteolaemus tetraspis osborni* (lung parasites) 582–586; *Lampetra minima* (parasitic lamprey possible evol. from non-par. sp.) 1019–1028; *Pteronotropis (welaka, hubbsi)* (parasitic nest-assoc. w/ centrarchids) 1068–1075.
PARTHENOGENESIS, *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) (origins of parthen. spp., mtDNA data) 432–440.
PHEROMONES, *Triturus boscai* (males ident. chem. cues from conspecifics & descrim. female cues) 874–878; *Lepomis cyanellus* (evid. for alarm chem. in centrarchid skin) 1079–1082.
PHYLOGENETIC ANALYSIS, *Cyprinella* (all 24 U. S. species) (clad. anal., mtDNA data, *C. lepida* & *C. lutrensis* not monophyl.) 1–10; *Crystallaria asprella* (clad. anal. of 5 isolated popns., 4 are ESU's, mtDNA data) 20–26; *Nototriton* (incl. *gamezi* n. sp.), *Oedipina (Oedipina* n. subgen., *Oedopinola* n. subgen. incl. *maritima* n. sp. & *savagei* n. sp.), *Cryptotriton* n. gen. (clad. anal., mtDNA data) 42–70; *Characidium (vestigipinne* n. sp., *occidentale, orientale, rachovii)* (phylogen. notes on clade) 150–155; *Luperosaurus (iskandari* n. sp., *serraticaudus* = *browni*, & 6 other spp.) (clad. anal. of genus, morph. charcs.) 191–209; *Phrynosoma (taurus, braconnieri)* (correl. w/ reprod. mode & seas. in genus) 222–229; *Candoia (bibroni, aspera, carinata* and other boids) (clad. anal., mtDNA data) 341–352; *Cyprinodon (macularius, eremus)* (clad. anal., mtDNA data, conserv. implics.) 353–364; Gonostomatidae (all 4 genera, 5 spp. reassigned to 5th genus) (clad. anal., mtDNA data) 378–389; Esocoidei (*Esox, Dallia, Novumbra, Umbra*, Esocinae n. subfam.) (clad. anal. of suborder, mtDNA data) 420–431; *Lacerta raddei* complex (2 bisex. spp., 5 parthen. spp.) (clad. anal., evid. for mult. origins of parthen. spp., mtDNA data) 432–440; *Odontesthes argentinensis* (clad. anal. of popns., evid. for speciation, allozyme data) 441–447; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni* = *S. curvirostris* spp. group) (clad. anal. of genus & rel. genera, morph. & osteol. data) 521–535; *Acantholingua ohridana* = *Salmo ohridana* (mt & nuclear DNA evid. for synon. genus, clad. anal. of *Salmo, Oncorhynchus, Salvelinus, Acantholingua*) 546–550; *Crocodylus* (12 living spp. & fossil spp.) (clad. anal. of genus & close rels., extant & fossils, osteol. charcs.) 657–673; *Ammocrypta (beani, bifascia, meridiana, vivax, clara, pellucida)* and all other darter genera (21 spp.) (clad. anal. of darters, mtDNA data) 701–711; Microdesmidae (*Cerdale, Clarkichthys, Microdesmus, Gunnellichthys, Paragunnellichthys*, 30 spp.) (clad. anal., morph. charcs., Ptereleotrinae genera not Microdesmids) 940–957; *Trichomycterus catamarcensis* n. sp. (phyl. comparison of n. sp. w/ congeners & rel. genera) 990–996; *Cottus (caeruleomentum* n. sp., *b. bairdi, girardi)* (clad. anal., mostly alloz. data) 1007–1018; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* (phyl. notes, monophyly of genus, incl. 12 other spp.) 1029–1047; *Pteronotropis (welaka, hubbsi, hypselopterus, euryzonus, signipinnis)* (clad. anal. not support monoph. of genus, mtDNA data) 1068–1075.
PHYSIOLOGY, *Desmognathus (monticola, fuscus), Eurycea cirrigera, Plethodon (cinereus, glutinosus)* (physiol. charcs. & presence of lg. competitors rel. to spp. distrib. along moisture gradient) 156–168; *Hemidactylus turcicus, Sceloporus olivaceous* (photobiosyn. of Vit. D, noct. & diurnal lizards compared) 245–250; *Nerodia sipedon* (testosterone increase in males, timing & degree, litter var.) 593–596; *Kinosternon sonoriense* (evid. of capac. to estivate) 684–700; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (of size-rel. overwintering mortal.) 732–739; *Ambystoma talpoideum* (size aff. met. rate of males but not females in paedomorphs) 808–812; Australian pythons (4 genera, 6 spp.) (extremely high digest. efficiency, not rel. to body temp. or meal size) 829–834; *Eulamprus tympanum* (timing & degree of incr. met. rate after feeding; lizard eats freq. small meals) 851–855; *Ambystoma tigrinum* (neurotoxin in skin granular gland secretion) 856–859; *Hyla regilla* (freeze toler., cryoprotectants) 863–868; *Rana sylvatica* (var. in met. rate during freeze recovery) 879–882; *Bufo woodhousii* (timing & degree of incr. met. rate after feeding, freq. small meals) 1076–1078.
POPULATIONS, *Crystallaria asprella* (phylogen. anal. of 5 isolated popns., 4 are ESU's, mtDNA data) 20–26; *Ambystoma macrodactylum* (genetic popn. struct. shows evol. charcs. of popns., migration rate, allozyme data) 27–35; *Gambusia affinis* (cannib. aff. popn. dyn.) 216–221; *Etheostoma zonale* (w/in popn. ann. var. in clutch & egg size) 230–233; *Morone saxatilis* (eff. of temp. & salin. var. on

1st yr. growth, popn. diffs.) 291–296; *Candoia (bibroni, aspera, carinata* and other boids) (genet. separ. btwn. popns. w/in spp.) 341–352; *Ambystoma californiense* (breeding popn. struct., popn. viability) 365–377; *Odontesthes argentinensis* (popn. genet. indicate speciation, alloz. evid.) 441–447; *Paralabrax maculatofasciatus* (var. hermaph. pttns. btwn. 6 isol. popns.) 459–468; *Ambystoma annulatum* (non-glacial past climatic chngs. rel. to mtDNA var. btwn. popns.) 542–545; *Salaria fluviatilis* (evid. of popn. origins from 2 diff. colonizations) 723–731; *Noturus phaeus* (popn. dens., age & growth struct., seas. var.) 757–762; *Crotaphytus collaris* (small eff. popn. size, low dispersal rate) 786–791; *Phalloceros caudiomaculatus* (popn. var. in new pttn. of livebearing: matrotrophic, no superfetation) 792–798; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. (fish assemblage var. across space & time in large reservoir) 917–930; *Lampetra minima* (present disjunct distrib., var. btwn. popns.) 1019–1028.

PREDATION, *Acanthochromis polyacanthus* (eff. of small pred. fishes on juv. coral reef fish) 36–41; *Gonatodes (hasemani, humeralis)* (snake pred. may be import. in niche diffs. btwn. sympat. gekkos) 83–95; *Mabuya (sulcata, variegata, acutilabris)* (diff. anti-pred. beh. in ambush vs. active foragers) 112–118; *Mabuya (striata sparsa, acutilabris)* (chem. prey detect. in active forager, not ambush forager) 112–118; *Rana (sylvatica, pipiens, clamitans, catesbiana)* (larval morph. changes in presence of pred.) 178–190; *Gambusia affinis* (cannib. aff. popn. dyn.) 216–221; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (pttns. of pred.-induced tdpl. tail damage) 390–401; *Cnemidophorus littoralis* n. sp. (lizard stom. conts.) 501–509; *Dasyatis marianae* n. sp. (adult cobia ate n. sp.) 510–515; *Hyperolius* (4 W. Ugandan spp.) (heavy fly infest. on arboreal egg masses, signif. mortal.) 560–566; *Osteolaemus tetraspis osborni* (prey type varies, stom. conts.) 582–586; *Hemidactylium scutatum, Desmognathus ocoee* (*H. scutatum* eggs toxic to beetle preds.) 597–600; *Gallotia (simonyi, stehlini, atlantica, caesaris)* (only 2 largest spp. use threat display in pred. defence) 601–605; *Noturus phaeus* (stom. conts., seas. diffs.) 757–762; *Hydrolagus affinis* (first report of fish pred. on hydrothermal vent mussels) 806–807; *Ambystoma tigrinum* (neurotoxin and adhesive in skin granular gland secretions, broad anti-pred. effs.) 856–859; *Crocodylus acutus* (low nest pred.) 869–873; *Boiga irregularis* (mechanical mouse lure for trapping snakes) 886–888; *Lampetra minima* (prey spp. of parasitic lamprey) 1019–1028; *Lycenchelys fedorovi* n. sp. (prey types, stom. & intest. conts.) 1056–1061; *Lepomis cyanellus* (alarm chem. in centrarchid skin stim. anti-pred. beh.) 1079–1082.

REPRODUCTION, *Oedipina maritima* n. sp. (notes) 42–70; *Crenicara punctulata* (protogyn. hermaph.) 71–82; *Gonatodes (hasemani, humeralis)* (very sim. btwn. sympat. gekkos) 83–95; *Mabuya acutilabris* (large clutch mass in ambush forager) 112–118; *Caretta caretta* (environ. factors in nest-site selection) 119–128; *Plethodon cinereus* (territ. defence by pairs, var. w/season & intruder types) 169–177; *Phrynosoma (taurus, braconnieri)* (mode & seas. unique for genus) 222–229; *Etheostoma zonale* (w/in popn. ann. var. in clutch & egg size) 230–233; *Catostomus (discobolus, latipinnis), Xyrauchen texanus* (evid. of spawning in Grand Canyon, rel. to trib. outflows) 238–244; *Acris crepitans blanchardi* (female phonotaxis pref. not aff. by amplexus) 257–261; *Cottus pygmaeus* (allopaternal care, peak spawning, clutch size, htchng. time) 262–264; *Ambystoma californiense* (below replcmnt. rate) 365–377; *Paralabrax maculatofasciatus* (var. hermaph. pttns. btwn. 6 isol. popns.) 459–468; *Etheostoma (nigripinne, crossopterum, nigripinne* x *crossopterum)* (sound prod. during spawning) 475–481; *Hyperolius* (4 W. Ugandan spp.) (reprod. seas., degree of fly infest. on eggs) 560–566; *Pimephales notatus* (male sound prod. during reprod. aggress.) 567–571; *Nerodia sipedon* (testosterone increase in males, timing & degree, litter var.) 593–596; *Hemidactylium scutatum, Desmognathus ocoee* (*H. scutatum* eggs toxic to beetle preds.) 597–600; *Pleurodema borellii* (reprod. seas., ovipos. site selection) 606–609; *Podarcis milensis* (unusually small & freqent clutches, long reprod. seas., small adult body size) 610–614; *Cnemidophorus lineatissimus* (seas. rel. to rainfall, age & size at matur., clutch size) 712–722; *Etheostoma olmstedi* (parentage of offspring in male-guarded nests) 740–747; *Podarcis atrata* (seas., size at matur., clutch, egg and htchlng. size) 748–756; *Etheostoma oophylax* (male fin egg-mimic size var.) 782–785; *Phalloceros caudiomaculatus* (new pttn. of livebearing: matrotrophic, no superfetation) 792–798; *Ambystoma talpoideum* (size aff. met. rate of males but not females, rel. to reprod. physiol. gender diffs.) 808–812; *Podarcis bocagei* (some preg. females show male color pttn. to reduce cop. attempts by males?) 819–825; *Dasyatis americana* (gest. length, sex ratio, size of neonates, litter size rel. to maternal size) 826–828; *Crocodylus acutus* (nesting ecol.) 869–873; *Triturus boscai* (males descrim. chem. cues from females, rel. to mating beh.) 874–878; *Physalaemus pustulosus* (nest site choice: avoid conspecific nests) 883–885; *Ctenophorus (decresii, ornatus)* (incub. temp. determ. htchlg. sex & tail length) 958–964; *Diaporna speculiferum* (seas., fecund., intern. inseminator, compared to int. & extern. insem. rels.) 983–989; *Lampetra minima* (nesting) 1019–1028; *Lycenchelys fedorovi* n. sp. (seas., egg descript.) 1056–1061; *Calotes versicolor* (matern. body size rel. to clutch & egg size, seas. var. in egg size) 1062–1067; *Pteronotropis (welaka, hubbsi)* (sister spp. parasitic nest-assoc. w/ centrarchids) 1068–1075; *Physalaemus pustulosus* (male/female & yr. to yr. var. in breeding activ. in resp. to rainfall, adapt. signif.) 1104–1108.

SALINITY, *Caretta caretta* (in nest-site selection) 119–

128; *Morone saxatilis* (eff. of temp. & salin. var. on 1st yr. growth, popn. diffs.) 291–296; *Salaria fluviatilis* (orig. of freshwater sp. from marine ancestor) 723–731.

SEX, *Ctenophorus (decresii, ornatus)* (incub. temp. determ. htchlg. sex) 958–964; *Lampetra minima* (male domin. sex ratio) 1019–1028; *Physalaemus pustulosus* (females breeding beh. more sens. to environ. cues than males) 1104–1108.

SEXUAL DIMORPHISM, *Gonatodes (hasemani, humeralis)* (diff. sex. dimorph. pttns., probably diff. soc. struct. btwn. sympat. gekkos) 83–95; *Eustomias (borealis* n. sp., *curtifilis* n. sp., 9 other spp.) (females larger) 96–111; *Anolis carolinensis* (in aggress. beh.) 140–149; *Characidium vestigipinne* n. sp. (& 6 congeners from Brazil) (in color & anal fin) 150–155; *Cyprinella venusta* (in ontog. & allometry of body shape) 270–275; *Nerodia sipedon* (rel. to testosterone levels in males) 593–596; *Podarcis milensis* (males larger) 610–614; *Kinosternon sonoriense* (in blood solute levels) 684–700; *Cnemidophorus lineatissimus* (males larger) 712–722; *Ambystoma talpoideum* (no sex. size dimorph. in paedomorphs but size aff. met. rate in males and not in females) 808–812; *Podarcis bocagei* (color dimorph., some preg. females show male color pttn. to reduce cop. attempts by males?) 819–825.

SIZE, *Acanthochromis polyacanthus* (eff. of size of preds. on juv. coral reef fish) 36–41; *Gonatodes (hasemani, humeralis)* (slight diffs. in body size & form btwn. sympat. gekkos) 83–95; *Rana (sylvatica, pipiens, clamitans, catesbiana)* (decreased body size in larvae in presence of pred.) 178–190; *Etheostoma zonale* (w/in popn. ann. var. in clutch & egg size) 230–233; *Cyprinella venusta* (sex. size dimorph. correl. w/ shape dimorph.) 270–275; *Polyodon spathula* (neg. allometry of rostral size) 288–290; *Symphurus insularis* n. sp. (dwarf sp.) 491–500; *Nerodia sipedon* (gender size diffs., rel. to testosterone levels in males) 593–596; *Gallotia (simonyi, stehlini, atlantica, caesaris)* (only 2 largest spp. use threat display in pred. defence) 601–605; *Podarcis milensis* (unusually small & frequent clutches, small adult body size) 610–614; *Cnemidophorus lineatissimus* (clutch size rel. to female size, size at sex. matur.) 712–722; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (size-rel. overwintering mortal.) 732–739; *Podarcis atrata* (fec. rel. to female body size, egg size var. w/ clutch size) 748–756; *Noturus phaeus* (body size, age & growth) 757–762; *Eleutherodactylus sambaqui* n. sp. (large size for *Eleutherodactylus*) 777–781; *Phalloceros caudiomaculatus* (polymodal adult male size, popn. var. in male size) 792–798; *Ambystoma talpoideum* (size aff. met. rate of males but not females) 808–812; *Oryzias latipes* (lack of correl. of egg or htchlng. size w/ htchlng. growth) 813–818; *Dasyatis americana* (size of neonates, litter size rel. to maternal size) 826–828; *Lampetra minima* (smallest parasitic lamprey) 1019–1028; *Calotes versicolor* (matern. body size rel. to clutch mass, seas. var. in egg size) 1062–1067.

SKIN GRANULAR GLANDS, *Ambystoma tigrinum* (neurotoxin and adhesive traits in secretion) 856–859.

SOUND, *Etheostoma (nigripinne, crossopterum, nigripinne* x *crossopterum)* (sound prod. during spawning) 475–481; *Pimephales notatus* (male sound prod. during reprod. aggress.) 567–571.

SURVIVAL, *Rana (blairi, sphenocephala, blairi* x *sphenocephala)* (of hybrid & non-hybrid larvae in dry environ.) 11–19; *Gambusia affinis* (surv. from cannib., refuge avail. aff. popn. dyn.) 216–221; *Ambystoma californiense* (popn. survivorship below replcmnt. level) 365–377; *Ascaphus truei, Bufo americanus, Phyllomedusa tomopterna, Pseudacris crucifer, Rana (catesbeianna, sylvatica), Rhinophrynus dorsalis* (from pred.-induced tdpl. tail damage) 390–401; *Cnemidophorus lineatissimus* (popn. mostly replaced annually) 712–722; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (body size rel. to overwintering surv., mech. for nat. select.) 732–739.

SYMBIOSIS, *Carcharhinus perezi, Elacatinus randalli* (shark cleaned by goby) 297–299; *Tomiyamichthys alleni* n. sp. (symb. w/ alpheid shrimp) 771–776.

SYSTEMATICS, *Cyprinella* (all 24 U. S. species) (phylogen. anal., mtDNA data, *C. lepida* & *C. lutrensis* not monophyl.) 1–10; *Crystallaria asprella* (phylogen. anal. of 5 isolated popns., 4 are evol. signif. units, mtDNA data) 20–26; *Nototriton* (incl. *gamezi* n.sp.), *Oedipina (Oedipina* n. subgen., *Oedopinola* n. subgen. incl. *maritima* n. sp. & *savagei* n. sp.), *Cryptotriton* n. gen. (phylogen. anal., n. gen, subgen. & spp., mtDNA data, morph. evid., review of genera) 42–70; *Eustomias (borealis* n. sp., *curtifilis* n.sp., 9 other spp.) (review 9 spp. & 2 n.spp., key to spp., mostly differ in barbel morph.) 96–111; *Hapalogenys merguiensis* n. sp. (n. sp. compared to 4 congeners) 129–139; *Characidium vestigipinne* n. sp. (& 6 congeners from Brazil) (n. sp., key to Brazilian spp., phylogen. notes) 150–155; *Luperosaurus (iskandari* n. sp., *serraticaudus* = *browni,* & 6 other spp.) (n. sp., phylogen. anal., morph. charcs., discuss generic boundaries, incl. *Ptychozoon*) 191–209; *Gila (robusta, intermedia, nigra)* (taxon. status of Gila R. chubs, key to spp.) 251–256; *Cyprinodon (macularius, eremus)* (phyl. anal., mtDNA data, conserv. implics.) 353–364; Gonostomatidae (all 4 genera, 5 spp. reassigned to 5*th* genus) (revision of family, mtDNA data, phyl. anal.) 378–389; Esocoidei (*Esox, Dallia, Novumbra, Umbra,* Esocinae n. subfam.) (revision of suborder, chng. fam. plcmnts., phyl. anal., mtDNA data) 420–431; *Liophis (taeniurus, festae, vitti* n. sp., *janaleeae* n. sp.) (describe scale & color diffs., *L. taeniurus* spp. group, n. spp.) 482–490; *Symphurus (insularis* n. sp., & 7 other spp.) (n. sp. compared w/ congeners, key to the 7 spp. in Medit. & E. Atlantic) 491–500; *Cnemidophorus (littoralis* n. sp., *nativo, ocellifer)* (compare n. sp. to close rels.) 501–509; *Dasyatis marianae* n. sp. (n. sp. compared to rel. congeners) 510–515; *Eleutherodactylus (ashkapara* n. sp., *fraudator, pluvicanorus)* (*E. fraudator* n. spp. group, compare n. sp. to other 2 spp.) 516–520; *Sternarchorhynchus (britskii* n. sp., *mesensis* n. sp., *curvirostris, roseni* = *S. cur-*

virostris spp. group) (phyl. anal. of genus & rel. genera, rediagnose genus, n. spp. compared to all congeners, key to all spp. [6]) 521–535; *Amolops bellulus* n. sp. (n. sp., compare to congeners) 536–541; *Acantholingua ohridana* = *Salmo ohridana* (mt & nuclear DNA evid. for synon. genus, phyl. anal. of *Acantholingua, Salmo* & 2 rel. genera) 546–550; *Mabuya* (104 spp.) (new scalation charc. useful in ident., phyl. & zoogeogr.) 615–618; *Crocodylus* (12 living spp. & fossil spp.) (rediagn. genus, osteol. charcs., incl. fossils) 657–673; *Ammocrypta (beani, bifascia, meridiana, vivax, clara, pellucida)* and all other darter genera (21 spp.) (phyl. anal. of darters, mtDNA data, supports *Ammocrypta* generic status) 701–711; *Phelsuma malamakibo* n. sp. (n. sp. compare to congeners) 763–770; *Tomiyamichthys (alleni* n. sp., *oni)* (n. sp., compare to congener & rel. genus, *Flabelligobius*) 771–776; *Eleutherodactylus (sambaqui* n. sp., *manezinho)* (compare n. sp. to close rel., n. sp. large size, discuss poss. spp. group affil.) 777–781; *Chaenogobius annularis* = *Chasmichthys dolichognathus* (discover holotype of genus type sp. is senior synon., revisions of both genera will be necessary) 835–840; *Lycodes terraenovae* (rediscover syntypes, verify sp. valid., lectotype design., compare to sympat. congeners) 846–850; *Hyla (chrysoscelis, versicolor)* (ident. of museum specimens: nucleolar number not good charc.) 860–862; Microdesmidae (*Cerdale, Clarkichthys, Microdesmus, Gunnellichthys, Paragunnellichthys,* 30 spp.) (phyl. anal., morph. charcs., Ptereleotrinae genera not Microdesmids, diagn. charcs. for genera) 940–957; *'Barbus' serengetiensis* n. sp. (n. sp. compared to most-similar congeners) 973–982; *Trichomycterus catamarcensis* n. sp. (n. sp., phyl. comparison to congeners & rel. genera) 990–996; *Corymbophanes (kaiei* n. sp., *andersoni, bahianus* = *Hemipsilichthys bahianus)* (rediagn. genus, resdescribe sp., describe n. sp., reassign. sp., key to spp., phyl. compar. to other loricariids) 997–1006; *Cottus (caeruleomentum* n. sp., *b. bairdi, girardi)* (n. sp. member of *C. bairdi* spp. group, phyl. anal., alloz. data) 1007–1018; *Lampetra (minima, lethophaga)* (redescribe presumed-extinct sp., compare to rels., *L. lethophaga* is sister to *L. minima,* mtDNA data) 1019–1028; *Loricariichthys (edentatus* n. sp., *melanocheilus* n. sp., *rostratus* n. sp., *anus, castaneus, labialis, platymetopon)* (3 n. spp., redescribe 4 spp., key to 7 spp., phyl. notes, monophyly of genus incl. 12 other spp.) 1029–1047; *Aspidoras depinnai* n. sp. (n. sp., phyl. notes on rel. w/ congeners) 1048–1055; *Lycenchelys fedorovi* n. sp. (n. sp., compare to closely rel. congeners) 1056–1061; *Pteronotropis (welaka, hubbsi, hypselopterus, euryzonus, signipinnis)* (phyl. anal. not support monoph. of genus, mtDNA data) 1068–1075; *Etheostoma (denoncourti, tippecanoe)* (new popn. causes redescript. of *E. denoncourti,* compare to *E. tippecanoe* & other congeners, distrib. details) 1097–1103; *Lepidodactylus (lombocensis, intermedius)* (elevate to sp. status separate from *L. lugubris* & from each other, key to Group II spp. of genus) 1109–1113.

TEMPERATURE, *Gonatodes (hasemani, humeralis)* (body temps., diel cycles same btwn. sympat. gekkos) 83–95; *Caretta caretta* (in nest-site selection) 119–128; *Phrynosoma (taurus, braconnieri)* (rel. to reprod. mode & seas. in genus) 222–229; *Morone saxatilis* (eff. of temp. & salin. var. on 1st yr. growth, popn. diffs.) 291–296; *Xyrauchen texanus, Catostomus latipinnis, Gila cypha, Ptychocheilus lucius* (eff. of low temp. on early life stages) 402–412; *Cnemidophorus littoralis* n. sp. (mean body temp.) 501–509; *Caretta caretta, Lepidochelys kempii* (sea temp. rel. to turtle distrib.) 551–554; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (temp. & desicc. rel. to size-rel. overwintering mortal.) 732–739; Australian pythons (4 genera, 6 spp.) (digest. efficiency not vary w/ body temp. but passage time does) 829–834; *Elaphe obsoleta, Nerodia sipedon* (eff. of temp. during devel. on preferred body temp. in neonates) 841–845; *Hyla regilla* (freeze toler., cryoprotectants) 863–868; *Rana sylvatica* (var. in met. rate during freeze recovery) 879–882; *Dorosoma (cepedianum, petenense), Morone (saxatilis, chrysops), Aplodinotus grunniens, Ictalurus furcatus, Ictiobus bubalus, Carpiodes carpio* & 17 other less common spp. (seas. temp. var. aff. fish assemblage in large reservoir) 917–930; *Egernia major* (lg. rainfor. lizard thermoreg. in natural hab.) 931–939; *Ctenophorus (decresii, ornatus)* (incub. temp. determ. htchlg. sex & tail length) 958–964.

TOXICITY, *Hemidactylium scutatum, Desmognathus ocoee* (evid. of tox. of *H. scutatum* eggs to beetle preds.) 597–600; *Ambystoma tigrinum* (neurotoxin in skin granular gland secretion) 856–859.

URINARY BLADDER, *Pseudoplesiops (rosae, howensis)* (highly specialized, wall appears secretory) 1083–1089.

VOMERONASAL ORGAN, *Thamnophis sirtalis* (MRI imaging in living snakes) 265–269.

WATER BALANCE, *Caretta caretta* (moisture in nest-site selection) 119–128; *Desmognathus (monticola, fuscus), Eurycea cirrigera, Plethodon (cinereus, glutinosus)* (spp. diffs. in microhab. of retreats rel. to moisture) 156–168; *Kinosternon sonoriense* (evid. of capac. to estivate) 684–700; *Chelydra serpentina, Chrysemys picta, Graptemys pseudogeographica, Trachemys scripta* (cold temper. & desicc. rel. to size-rel. overwintering mortal.) 732–739.